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July 29, 2016

The Honorable Mark A. Troncone, J.S.C.  
Ocean County Courthouse  
100 Hooper Avenue  
Toms River, New Jersey 08754-2191

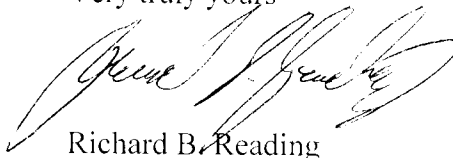
**Re: IN ALL DECLARATORY JUDGEMENT ACTIONS FILED BY VARIOUS  
MUNICIPALITIES, COUNTY OF OCEAN, PURSUANT TO THE SUPREME  
COURT'S DECISION IN In Re Adopriom of N.J.A.C. 5:96, 221 N.J. (2015)**

Dear Judge Troncone:

Pursuant to the Ninth Revised Case Management Order, dated July 12, 2016 and which amended the Eighth Revised Case Management Order of June 21, 2016, I have completed the methodology report setting forth the proposed regional housing need and the allocation of said need to the constituent Ocean County municipalities. The enclosed report has been expanded to include the updated methodology reports submitted through May 16, 2016 by Econsult Solutions and through May 17, 2016 by Fair Share Housing Center. Additionally, it was also necessary to further revise and update this report to incorporate the July 11, 2016 Opinion of the Appellate Division regarding the inclusion of a retrospective obligation for the "Gap Period".

A summary of the review of the alternative methodologies presented by FSHC and Econsult along with the findings and recommendations for the utilization of portions of these alternative methodologies for the estimation of the affordable housing needs of Ocean County's municipalities is set forth in the July 29, 2016 Report and Recommendation, Low and Moderate Income Housing Needs in Ocean County, New Jersey that is enclosed herewith. Copies of this report are being forwarded via email to all parties identified on the email service list.

Very truly yours



Richard B. Reading

RBR/ta  
Encl

cc: Honorable Marlene Lynch Ford, A.J.S.C.

**REPORT AND RECOMMENDATION**

**LOW AND MODERATE INCOME HOUSING NEEDS**  
**IN**  
**OCEAN COUNTY, NEW JERSEY**

July 29, 2016

Submitted to: The Honorable Mark A. Troncone, J.S.C.  
The Honorable Marlene Lynch Ford, A.J.S.C.  
Superior Court of New Jersey  
Law Division: Ocean County

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## **SUMMARY OF FINDINGS**

- o **Fair Share and Municipal Compliance** - The ensuing evaluation has been prepared at the request of the court to assist in its review and assessment of matters resulting from the Supreme Court's decision in In The Matter Of The Adoption of N.J.A.C. 5:96 And 5:97 By The Council On Affordable Housing, 221 N.J. (2015). The inability of COAH to promulgate and adopt viable third round rules has resulted in the current situation where the Mount Laurel designated judges must not only hear and decide actions addressing municipal compliance, but must also establish a "fair share" against which municipal compliance may be measured.
- o **Alternative Methodologies** - Methodologies for estimating affordable housing needs have been submitted to the court by the Fair Share Housing Center and by Econsult Solutions, Inc. As directed by the court, this report reviews and compares the analytical processes, data base and procedures that are employed by these alternative methodologies to establish the numerical needs and obligations for the municipalities in Ocean County.
- o **Prior Round Obligation** - Minor deviations exist between FSHC and Econsult in their estimates of the 1987-1999 Prior Round Obligations due to the particular data source used. These deviations, including any subsequent corrections made by COAH, should be addressed through individual municipal adjustments that are accomplished in the course of compliance activities.
- o **Present Need** - This component of municipal affordable housing needs is represented by deficient housing occupied by low and moderate income households. Housing deficiency is now measured by the number of housing units that have inadequate plumbing facilities or inadequate kitchen facilities or are old (at least 50 years old) and crowded (more than 1.01 persons per room). Both methodologies provide estimates of Present Need at the beginning of the Prospective Need Period (2015), however FSHC's calculation truncates the time frame in the definition of "old" in one of their estimates, undermining an accurate measurement of 2015 Present Need. Accordingly, Econsult's higher estimate of 2015 Present Need is recommended for this component of affordable housing need.
- o **Prospective Need** - Affordable Housing needs from 2015 to 2025 are based on future looking population projections and other estimates. The foundation for the growth estimates of FSHC and Econsult are the 20 year projections of the New Jersey Department of Labor and Workforce Development (NJDLWD). FSHC uses the single projection of the Economic-Demographic Model while Econsult utilizes the Round 2 methodology where the projections of the Historic Migration and Economic Demographic Models are averaged. The averaged projection yields a forecast that is more conservative while the Economic-Demographic model anticipates a higher rate of population growth. The NJDLWD projections anticipate that population growth between 2015 and 2025 will be entirely comprised of older (65 +) households while the number of total and LMI working age households declines. The entirety of the projected growth in elderly and smaller households would suggest a declining household size that would yield a greater, rather than lesser, household growth even with a population growth similar to the post 2000 increments. The population and household growth estimated in the FSHC projections and headship rates are recommended for the prospective need period. It is further recommended that the proportion of the total household growth represented by LMI households between 2015 and 2015 be prepared using actual household incomes be utilized.

- o **Municipal Allocations** - The allocation of regional estimates of affordable housing need to municipalities is made by FSHC and Econsult using different numbers of qualified urban aid municipalities, different measures of non-residential responsibility, different measures of median and mean income, different estimates of vacant land using GPS surveys as opposed to municipal property data and a different weighting of overall municipal shares using either three or four factors. The greater potential accuracy of the employment based allocations as well as the property-based vacant land determinations used by Econsult would represent improvements over the use of the non-residential valuation as a proxy for employment as would the use of municipal property classifications compared to GIS surveys. These improvements, however, represent a deviation from the data sources utilized in Round 2. Accordingly, the municipal allocations factors used by FSHC are recommended.
  
- o **Secondary Sources** - Secondary source adjustments to the supply of LMI housing units include demolitions, conversions and filtering. The estimates of the number of demolitions affecting LMI housing prepared by Econsult are more detailed and precise in the identification of the portion of demolitions estimated to be LMI occupied and the portion that are deficient, and are recommended for the purpose of determining this secondary source. Residential conversions were determined to be a source of LMI housing supply in prior rounds and are calculated as the residual between actual housing growth and the sum of authorizations less demolitions. Housing market conditions since 2000, where many building permits did not result in new construction would suggest negative conversions. In view of the post 2000 economic conditions that are basis for the projection of 2015-2025 changes, the use of certificates of occupancy, which does yield a positive residual, is the recommended approach. The filtering of existing housing represented a supply of LMI housing in prior rounds, however, the procedures utilized by FSHC and Econsult are so replete with an abundance of adjustments, probabilities, likelihoods and extrapolations, and result in estimates that are beyond the realm of reconciliation. It is recommended that filtering not be included in the determination of fair share obligations of the municipalities in Ocean County
  
- o **Recommendations** - The estimation and assignment of affordable housing needs to Ocean County's municipalities using a composite of the methodologies that have been submitted: 1) the 1987-1999 Prior Round Obligation for Ocean County municipalities have minor deviations that may be adjusted in municipal proceedings; 2) the use of a consistent definition for the determination of deficient housing units in estimating Present Need is recommended; 3) for the estimates of Prospective Need, the projections of NJDLWD's Economic-Demographic model are recommended, with the proportion of LMI units determined using median household incomes derived directly from Census and ACS income data; 4) secondary source adjustments to LMI housing needs affected by demolitions and conversions are recommended, while an adjustment for filtering, due to the lack of direct and reliable data, a multiplicity of assumptions, excessive mathematical extrapolations, is not recommended.
  
- o **Ocean County Affordable Housing Needs** - The methodological recommendations for Ocean County would yield a Prior Round estimate of 8,880 LMI households, a Present Need estimate of 2,192 LMI households and a Prospective Need for 5,784 LMI households. The recommended affordable housing needs for the Ocean County municipalities for the Prospective Need period, which amount 5,784 LMI units prior to the 1,000 unit cap, are approximately 40 percent of FSHC's estimate of 14,475 LMI households, but are 2.7 times Econsult's estimate of 2,122 LMI households.

## **1.0 INTRODUCTION**

The failure of the Council On Affordable Housing (COAH) to fulfil its responsibilities under the Fair Housing Act and its own regulations, and its inability to adopt third round rules as directed by the New Jersey Supreme Court, resulted in the Court's March 10, 2015 decision in "Mount Laurel IV". As a result of COAH's inability to act, the Court in Mount Laurel IV, have returned to the courts their role as the forum of first resort for evaluating municipal compliance with Mount Laurel<sup>1</sup> obligations. Because of COAH's inactions, the Mount Laurel designated judges must now, not only hear and decide actions addressing municipal compliance with constitutional obligations, but must also establish a "fair share" against which municipal compliance may be measured. The absence of an established "yardstick" for the measurement of municipal compliance, previously provided by COAH, is complicated by a significant divergence of opinions advanced by the competing interests as to an appropriate calculation of a municipality's "fair share".

The Court's guidance during this transition, consistent with the processes authorized by the FHA, involves a judicial determination of affordable housing needs that will assist in the assessment of the legitimacy of a municipality's compliance plan. These processes include conciliation, mediation and the use of special masters. During the court's initial meetings with the parties, it became apparent that the municipalities needed some direction from the court regarding the development of an appropriate methodology to determine their third round obligations. The court has established a procedure to determine a preliminary affordable housing obligation for each municipality that would provide a rational basis for preparation and filing of an affordable housing plan. This procedure was based upon the language contained in Mount Laurel IV where the Supreme Court found:

In the end, a court reviewing the submission of a town that had participation status before COAH will have to render an individualized assessment of the town's housing element and affordable housing plan based upon the court's determination of present and prospective need for affordable housing applicable to that municipality. A preliminary judicial determination of the present and prospective need will assist in assessing the legitimacy of the town's plan, as proposed and

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<sup>1</sup> Southern Burlington NAACP v. Twp. of Mount Laurel, 67 N.J. 151 (1975), Southern Burlington County NAACP, et al v. Township of Mount Laurel 92 N.J. 158 (1983 (Mount Laurel II))

supplemented during the processes authorized under the FHA-conciliation, mediation, and use of special masters-and employed in the court's discretion. The court will be assisted in rendering its preliminary determination on need by the fact that all initial and succeeding applications will be on notice to FSHC and other interested parties. [221 N.J. at 293]

The court has followed this process, and on October 30, 2015, a Preliminary Review and Assessment was issued that considered the information that had been provided by the interested parties regarding the methodology for the calculation of affordable housing needs that would allow a municipality to prepare and file an affordable housing plan with the Court by the December 8, 2015 deadline imposed by the Supreme Court. Following the issuance of the court's preliminary estimates of affordable housing needs for each municipality, continued discussions, mediation and case management conferences were held and each of the interested parties, including FSHC, the New Jersey Builders Association (NJBA), the New Jersey League of Municipalities (NJLM), intervener property interests, individual municipalities and a consortium of municipalities who have retained Econsult Solutions (Econsult). All interested parties were invited to submit reports and briefs related to the methodology for the calculation and assignment of affordable housing needs. During this period, comments were also solicited regarding the last methodology (third iteration of third round rules) issued by COAH, were received and discussed in a case management conference.

In the course of the review of COAH's last rule proposal, the issue of housing obligations during "Gap Period" (1999-2015) arose as well as the application of FHA's 1,000 unit "cap". All of the interested parties agreed that these issues needed to be addressed prior to a further determination of affordable housing needs. Briefs and reports were requested and received on these issues and oral arguments were heard by the court. On February 18, 2016, the court rendered a decision that the Gap Period should be included within the calculation of affordable housing need and set forth a framework for the application of the 1,000 unit "cap". The court's inclusion of the "Gap Period" was appealed and was the subject of the July 11, 2016 Appellate Division opinion that determined that the Fair Housing Act does not require the calculation of new and separate affordable housing needs for the gap period. Having resolved this legal question (notwithstanding continuing arguments that Present Need should be expanded to capture all or part of Gap Period needs) the alternative methodologies for the calculation of the "Present Need" and "Prospective Need" are reviewed on the following pages.



## **2.0 THE REVIEW PROCESS**

When the Court rendered its March 10, 2015 decision in Mount Laurel IV and returned to the courts their role as the forum of first resort for evaluating municipal compliance with Mount Laurel obligations, there was no adopted methodology to establish a “fair share” against which municipal compliance was to be measured. COAH’s last (third) iteration of Third Round rules were not adopted and there was no alternative methodology that established municipal and regional affordable housing obligations. These revised methodologies were presented on March 24, 2016 and comments upon the revised methodologies were submitted on April 19, 2016. This introduction provides a summary of the process resulting in the specific methodologies now presented to the court by FSHC and Econsult and supplemented by reports and briefs from other interested parties.

### **History and Participants**

On April 16, 2016, Fair Share Housing Center (FSHC) produced a report entitled “New Jersey Low and Moderate Income Housing Obligations for 1999-2025..” that was offered as an alternative to COAH’s unadopted Third Round rules. This report was revised in July of 2015 and remained as the only alternative methodology at that time. In June of 2015, a group of municipalities entered into a shared services agreement with Rutgers University to have Robert Burchell, PhD, prepare a fair share report for the municipal group. The Rutgers contract provided that the final report would be produced by September 30, 2015, however, due to Dr. Burchell’s health issues, the court was advised that Dr. Burchell would not be able to complete his report and the contract with Rutgers was terminated on September 11, 2016. Econsult Solutions, Inc. was engaged to replace Dr. Burchell and to prepare a report determining fair share responsibilities which was to be completed by the end of December 2015.

In order for municipalities to prepare and file an affordable housing plan with the court by the December 8, 2015 deadline imposed by the Supreme Court, the court authorized the preparation and release of the October 30, 2015 Preliminary Review and Assessment, Low and Moderate Income Housing Needs, Ocean County. At the time of the preparation of the Preliminary Review and Assessment, only the FSHC report was available for review and consideration, insofar as the

alternative analysis of affordable housing needs being prepared by Econsult would not be available until the end of December 2015.

Econsult completed and submitted its report entitled, “New Jersey Affordable Housing Need and Obligations” on December 30, 2015 and thus provided an alternative perspective for the calculation of municipal and regional affordable housing needs. Following the submission of the Econsult report, there have been an abundance of revisions, supplements, comments and critiques submitted by FSHC and Econsult relating to the methodologies employed in the determination of affordable housing needs. These methodologies were subsequently refined and updated and presented on March 24, 2016 and comments upon the revised methodologies were submitted on April 8, 2016.

### **Court Guidance**

The process used to calculate the housing needs of low and moderate income households in New Jersey follows a methodology that has been authorized by the FHA, implemented through rules adopted by COAH and refined through decisions over the past 30 years. The determinations by the Mount Laurel-designated judges as to whether the ordinances of a municipality provide for a realistic opportunity for the municipality to achieve its “fair share of the present and prospective regional need for low and moderate income housing” (Mount Laurel II, *supra*, 92N.J. 205) are also guided by the Court’s March 10, 2015 Mount Laurel IV decision:

The process developed herein is one that seeks to track the processes provided for in the FHA. Doing so will facilitate a return to a system of coordinated administrative and court actions in the event that COAH eventually promulgates constitutional Third Round Rules that will allow for the reinstitution of agency proceedings.

The judicial role here is not to become a replacement agency for COAH. The agency is *sui generis* – a legislatively created unique device for satisfaction of Mount Laurel obligations. In opening the courts for hearing challenges to, or applications seeking declarations of, municipal compliance with specific obligations, it is not this Court’s province to create an alternative form of statewide administrative decision maker for unresolved policy details of replacement Third Round Rules...”

Guidance as to the specific methodology to be utilized in the calculation of Third Round affordable housing needs was previously affirmed in the Supreme Court's September 2013 decision of the remedy contained in the Appellate Division's October 2010 order to COAH:

"Accordingly, we remand to COAH to adopt new third round rules that use a methodology for determining prospective need similar to the methodologies used in the first and second rounds. This determination should be made on the basis of the most up-to-date available data".

In addition to the Court's directives relating to the methodology for determining Prospective Need, the decision in Mount Laurel IV clearly established that municipalities had a continuing obligation to fulfill their unmet obligations from prior rounds and that these unfulfilled obligations should be the starting point in determining a municipality's fair share:

"...our decision today does not eradicate the prior round obligations: municipalities are expected to fulfill those obligations. As such, prior unfulfilled housing obligations should be a starting point for a municipality's fair share responsibility. Cf. In re Adoption of N.J.A.C 5:96 & 5:97, supra, 416 N.J. Super. at 498-500 (approving as a starting point, the imposition of "the same prior round obligations [COAH] had established as second round obligations in 1993"). [221 N.J. 1 (2015) (Mount Laurel IV)

### **Components of Affordable Housing Need**

Pursuant to the Fair Housing Act, Mount Laurel IV and Superior Court decisions subsequent to Mount Laurel IV, the municipal and regional fair share obligations are comprised of three components of need:

- (1) Prior Round Obligation - (1987-1999)
- (2) Present Need - (2015)
- (3) Prospective Need (2015-2015)

The specific procedures utilized in the calculation of the components of municipal and regional affordable housing needs may be expected to vary somewhat relative to the component of need being determined. Nevertheless, with the objective of determining the affordable housing needs of municipalities and regions and using a framework for such calculations that is similar to

the methodologies used in the first and second rounds, similarities might also be expected in the fair share calculations of the interested parties. Notwithstanding the receipt of a number of critiques as well as ongoing revisions in the calculations of affordable housing needs, there is clearly no consensus in the quantification of affordable housing needs. The determination of the “fair share” number continues to be one of the most troublesome issues and one that generates the greatest divergence of opinions.

### **Alternative Methodologies**

In addition to the municipalities seeking declaratory judgements, a number of interested parties have intervened in individual cases and/or in the consolidated proceedings established by the court to determine the regional housing needs and the allocation to municipalities. Non-municipal interests include the Fair Share Housing Center, the New Jersey Builders Association, the New Jersey League of Municipalities, and a consortium of municipalities that have retained a common consultant (Econsult) to produce a methodological alternative to the methodology produced by David Kinsey, PhD on behalf of FSHC. A number of public interest groups have also requested and been recognized as parties of interest.

Although there are a substantial number of interested parties involved in the current declaratory judgement proceedings, only two entities have produced and submitted complete “methodologies” that actually result in the calculation of affordable housing needs. These “methodologies” include the reports produced by David N. Kinsey on behalf of FSHC and the work prepared by Econsult Solutions on behalf of the consortium of municipalities. Additional reports were also prepared and submitted by Art Bernard and Otteau Valuation on behalf of NJBA, by Robert S. Powell, Jr. PhD on behalf of NJLM and by Daniel T. McCue on behalf of FSHC as well as numerous briefs submitted by Hill Wallack, Jeffrey Surenian Associates and Bisgaier Hoff. The reports that were submitted pursuant to the February 24, 2014, Sixth Revised Case Management Order, which established March 24, 2016 as the submission date for expert reports and the March 28, 2016 Seventh Revised Case Management Order, which established April 8, 2016 as the required submission date for critiques of expert methodology reports, included the following submissions:

### **March 28, 2016 and April 8, 2016 Expert Reports**

New Jersey Fair Share Housing Obligations for 1999-2025 (Third Round) Under Mount Laurel IV for Ocean County, Fair Share Housing Center, David N. Kinsey, PhD, dated March 24, 2016.

New Jersey Affordable Housing Need and Obligations, Econsult Solutions, Inc., Peter A. Angelides, PhD, dated March 24, 2016.

Gap Period Calculation, Econsult Solutions, Inc., Peter A. Angelides, PhD, dated March 24, 2016.

Fair Share Methodology Critique and Response, Econsult Solutions, Inc., Peter A. Angelides, PhD, dated April 8, 2016.

Response to February 19, 2016 Econsult Report “Response to Comments Regarding ESI Affordable Housing Needs and Obligations Report”, Art Bernard and Associates, LLC, Art Bernard, dated March 24, 2016.

Response to Econsult Analysis of the Gap Period and New Jersey Affordable Housing Need and Obligations, Art Bernard and Associates, LLC, Art Bernard, dated April 8, 2016.

Affordable Housing Needs in New Jersey, Review of Report on Behalf of New Jersey Builders Association, by Jeffrey G. Otteau, The Otteau Group, Dated November 6, 2016, Nassau Capital Advisers, LLC, Robert F. Powell, Jr., PhD, dated March 22, 2016.

Demographic and Economic Constraints on Inclusionary Zoning Strategy Utilized for the Production of Low and Moderate Income Housing in New Jersey, Focused on Region 4: Mercer-Monmouth-Ocean Counties, Nassau Capital Advisers, LLC Robert F. Powell, Jr., PhD, dated March 24, 2016.

Projecting Housing Demand in New Jersey by Age Group: 2015-2025, Daniel T. McCue, dated March 24, 2016.

Comment on Household Projections Methodology in the ESI Report- “New Jersey Affordable Housing Need and Obligations”, Daniel T. McCue, dated April 8, 2016.

Response to March 24, 2016 Report by Robert W. Powell, PhD, Demographic and Economic Constraints on the Inclusionary Zoning Strategy Utilized for the Production of Low and Moderate Income Housing in New Jersey, Otteau Group, Jeffrey G. Otteau, dated April 8, 2016.

Over the course of the declaratory judgment proceedings, the methodologies produced by FSHC, Econsult and other consultants have been further refined, revised, updated and/or supplemented with additional revisions provided while awaiting the Appellate Division’s review of

the legal status of the gap period. The post April 8, 2016 documents and reports, include the following submissions:

**Supplemental Reports  
Received after the March 24, 2015 Final Reports  
and April 8, 2016 Responses to the March 24, 2016 Reports**

Response to Reports by Econsult Solutions, Inc., and Nassau Capital Advisors, LLC, March 2016, on New Jersey Fair Share Obligations, Fair Share Housing Center, David N. Kinsey, PhD, dated April 9, 2016.

Response to Reports by Econsult Solutions, Inc., and Nassau Capital Advisors, LLC, March 2016, on New Jersey Fair Share Obligations, Fair Share Housing Center, David N. Kinsey, PhD, In The Matter of Declaratory Judgment Actions in Hunterdon, Somerset and Warren Counties, dated May 2, 2016.

New Jersey Fair Share Housing Obligations for 1999-2025 (Third Round) Under Mount Laurel IV, David N. Kinsey, PhD, Submitted in Declaratory Judgment Proceedings throughout New Jersey, dated May 17 2016.

Response to Reports by Econsult Solutions, Inc., and Nassau Capital Advisors, LLC, March-May 2016, on New Jersey Fair Share Obligations, Fair Share Housing Center, David N. Kinsey, PhD, dated May 17, 2016.

Response to Comments Regarding ESI Affordable Housing Need and Obligations Report, Econsult Solutions, Peter A. Angelides, PhD, dated May 2, 2016.

New Jersey Affordable Housing Need and Obligations, Econsult Solutions, Inc., Peter A. Angelides, PhD, dated May 16, 2016.

ESI Response to Comments Monmouth County, Econsult Solutions, Inc., Peter A. Angelides, PhD, dated May 16, 2016.

Response to Econsult Analysis of the Gap Period and New Jersey Affordable Housing Need and Obligations, Art Bernard and Associates, LLC, Art Bernard, May 6, 2016.

“Response to Comments Regarding ESI Affordable Housing Need and Obligations Report” by Econsult, Inc., dated May 2, 2016”, Daniel T. McCue, dated May 17, 2016

The primary documents that provide methodologies that result in the calculation of affordable housing needs are the March 24, 2016 FSHC and Econsult reports, as supplemented, updated and revised in the subsequent May 16, 2016 and May 17, 2016 reports.

The supplemental reports and critiques provide useful insights into certain calculations and procedures utilized in the alternative methodologies utilized by FSHC and Econsult. The most recent methodology reports, submitted on May 16, 2016 and May 17, 2016, represent the most up-to-date and complete methodologies for the calculation of municipal and regional affordable housing needs, supplementing and replacing the prior submissions by FSHC and Econsult. These May 2016 reports include a complete, statewide calculation of affordable housing needs and, therefore, have also been included in this report and recommendation.

### **Procedure and Comparisons**

The process employed in the calculation of affordable housing needs involve sequential determinations of data and calculations utilized to quantify and allocate municipal and regional housing needs. As previously noted, the data base and process varies somewhat based upon the component of need (Prior Round, Present Need and Prospective Need) that is being evaluated. The determination of affordable housing needs is a complex process that, after 15 years and three unsuccessful attempts, was not achieved by COAH. Even with a defined objective and a framework based upon that utilized in the prior rounds, it is not a prescribed mathematical process that will yield identical results when undertaken by different practitioners. The complexity of the calculation and the degree of sophistication necessary to estimate and allocate affordable housing needs necessarily requires a number of decisions in the selection and utilization of data and the consequences of these choices will invariably influence the outcome of such calculations.

The basic procedure requires the determination of housing regions, the time frames for the need calculations, the identification and availability of data, the quantification of prior round obligations, the calculation of present need, projections of population growth, estimates of household and employment growth, determination of the proportion of low and moderate income (LMI) households, calculations of secondary sources of affordable housing supply, the allocation of affordable housing needs to regions and municipalities, the computation and adjustments for applicable “Caps”. Each of these processes may involve a number of intervening steps that include the use of estimates, projections, surrogates and proxies contingent upon the availability of reliable and useful data. The procedure that is based upon the most reliable data, utilizes as few assumptions as possible and has an internal system of checks and balances will yield the most reasonable and realistic results.

The review process that is utilized examines and compares the alternative methodologies advanced by FSHC and Econsult for the purpose of determining municipal needs and obligations for affordable housing. It is not the intent of this review to introduce yet another methodology, but to assess the data, procedures and assumptions of the FSHC and Econsult approaches and their ability to determine numerical needs and obligations for municipalities and regions.

## **HOUSING REGIONS**

The New Jersey Supreme Court in its Mount Laurel decisions, and the Fair Housing Act have determined that municipalities have “a constitutional obligation to provide through its land use regulations a realistic opportunity for a fair share of its region’s present and prospective needs for housing for low and moderate income families” (N.J.A.C. 52:27D-302).

### **Definition**

Given the importance of housing regions for the determination of municipal fair share obligations, it would be expected that standards for the determination of the extent and configuration of such regions would need to be established. The Fair Housing Act provides some insight into the basis for the regional delineations in its definition of “Housing Region”:

“... a geographic area of not less than two nor more than four contiguous whole counties which exhibit significant social, economic and income similarities, and which constitute to the greatest extent practicable the primary metropolitan statistical areas last defined by the United States Census Bureau prior to the effective date of P.L. 1985, c. 222 (C.52:27D-304 b.) [N.J.S.A. 52:27D-304 b.]

### **Prior Round Delineations**

There were six Housing Regions established in Round 1, and these Regions were adjusted in Round 2 to include at least one “central city” and to consider “journey to work” information. The adjustments that were undertaken in Round 2 moved Sussex County from Region 2 to Region 1; Warren County from Region 3 to Region 2 and Mercer County from Region 5 to Region 4. These revisions resulted in the following Regions, which have not been further adjusted:



### **New Jersey Council On Affordable Housing Regions (1993-1999)**

<u>Region</u>	<u>Counties Included</u>
Region 1- Northeast	Bergen, Passaic, Hudson, Sussex
Region 2 -Northwest	Essex, Morris, Union, Warren
Region 3 - West Central	Middlesex, Somerset, Hunterdon
Region 4 - East Central	Monmouth, Ocean, Mercer
Region 5 - Southwest	Camden, Gloucester, Burlington
Region 6 - South-Southwest	Atlantic, Cape May, Cumberland, Salem

The Round 3 calculations prepared by COAH, through the last, unadopted regulations published on June 2, 2014, continued to utilize the Housing Regions that were established in Round 2, notwithstanding the more recent information available from both the 2000 and 2010 Census.

**FSHC Regions** - The methodology employed by the Fair Share Housing Center in its March 24, 2016 report: “New Jersey Fair Share Housing Obligations for 1999-2025” has adopted and utilized, the Round 2 Housing Regions. It is further noted by FSHC (page 26) that “COAH reexamined and reaffirmed these six housing regions in 2004, 2008 and 2014. No further analysis or change in housing regions is required”.

**Econsult Regions** - The March 24, 2016 report prepared by Econsult Solutions entitled “New Jersey Affordable Housing Need and Obligations” presented a more detailed examination of Housing Regions established in the Prior Rounds. Econsult reviewed the definition of the Housing Regions established in Round 1 and in Round 2, examined live/work relationships, discussed the changes in the 1999 PMSA and 2013 Metropolitan Area definitions and concluded that while other configurations are possible, these other combinations would be influenced by judgmental factors that would need to be balanced with the FHA’s objective of defining regions “which exhibit social, economic and income similarities”. In the absence of an alternative standard, Econsult has utilized the regional groups defined in Round 2 and most recently used by COAH and FSHC.

### **Region Comparisons**

The housing regions established pursuant to the FHA, established (modified) by COAH in Round 2 and maintained by COAH in all three iterations of the third round rules, has been accepted by both FSHC and Econsult in their most recent (May 2016) methodologies.

#### **4.0 PRIOR ROUND OBLIGATION**

The municipal affordable housing needs that were established in the Prior Rounds (1987-1993) that have not been satisfied, continue as an unmet obligation, legally assigned by COAH, that remains to be fulfilled by those municipalities. The Supreme Court, in its March 2015 decision, confirmed that municipalities are expected to fulfill their prior round obligations that were established for the period from 1987-1993:

“...our decision today does not eradicate the prior round obligations; municipalities are expected to fulfill those obligations. As such, prior unfulfilled housing obligations should be the starting point for a determination of a municipality’s fair share responsibility. Cf. In re Adoption of N.J.A.C. 5:96 & 5:97, supra, 416 N.J. Super at 498-500 (approving, as a starting point, imposition of “the same prior round obligations [COAH] had established as the second round obligations in 1993”). *221 N.J. 1 at 421*

#### **1987-1999 Obligations**

The Court has approved the maintenance of the 1987-1999 Prior Round obligations as established in 1993 as opposed to the re-calculated obligation that encompassed subsequently observed population and housing changes. The records maintained by the New Jersey Department of Community Affairs reveal that the data representing the municipal Round 1 and Round 2 obligations, as originally assigned in 1993, yielded a total Statewide affordable housing obligation for 85,853 units, which is only slightly different than the total of 85,964 units published in 2008 by COAH in the second iteration of the Third Round rules.

**FSHC Prior Round Obligation** - The May 17, 2016 report prepared for FSHC discloses a Prior Round Obligation for 85,964 affordable housing unit and is reported to be based upon the COAH’s calculation in 1993-1994 and published in 2008.

**Econsult Prior Round Obligation** - Econsult’s May 16, 2016 “New Jersey Affordable Housing Need and Obligations” report identifies a Prior Round Obligation for 85,853 affordable housing units, which is the obligation maintained by the New Jersey Department of Community Affairs and assigned to municipalities for Round 2 in 1993. The minor deviation (85,964 vs.

85,853) was reported (Econsult, March 24, 2016, page 92) to be due to differences in three municipalities (Wildwood City, Penns Grove Borough and Harvey Cedars Borough).

### **Ocean County Prior Round Obligations**

In the context of Ocean County, the Prior Round Obligations calculated by FSHC amount to 8,880 units while Econsult's calculations reveal 8,887 units. These total differences are confined to three municipalities:

<b><u>Prior Round (1987-1993) Affordable Housing Obligations</u></b>			
	FSHC 05/17	Econsult 05/16	
	<u>05/17/16</u>	<u>05/16/16</u>	<u>Difference</u>
Barnegat Light Borough	84	83	-1
Harvey Cedars Borough	37	44	+7
Mantoloking Borough	<u>59</u>	<u>60</u>	<u>+1</u>
Ocean County	8,880	8,887	+7

The deviations in Barnegat Light and Mantoloking appear to be "rounding" differences while Harvey Cedars is one of the three New Jersey municipalities with an identified discrepancy.

### **Other Adjustments**

In addition to these minor differences, COAH also made subsequent corrections to the prior round obligations assigned to the Town of Morristown in Morris County (from 227 units to 138 units) and for Dover Township (now Toms River Township) in Ocean County from 2,233 units to 1,735 units. These two documented corrections would, collectively, reduce the prior round obligation by 587 units and it is possible that there are other corrections that are unreported.

### **Prior Round Obligation Comparisons**

Both FSHC and Econsult acknowledge that the Prior Round (1987-1999) obligations represent an obligation legally determined by COAH, assigned to municipalities and upheld by the Court that must be satisfied. The total deviations in their calculations amount to 111 affordable housing units statewide, including 7 units in Ocean County, as well as COAH's subsequent reduction

of 498 units in the Prior Round Obligation for Toms River Township that was not included by either FSHC or Econsult.

**Prior Round Statewide Obligation**

	1987-1999
FSHC	85,964
Econsult	85,853

In view of the minor deviations between FSHC and Econsult in this component of affordable housing need, either methodology would provide a reasonable estimate of the prior round municipal obligations. Any deviations, including subsequent corrections made by COAH, could be addressed in individual municipal adjustments and accomplished in the course of compliance activities.

## **5.0 PRESENT NEED**

Present Need, also referred to as “Indigenous Need” or “Rehabilitation Share” represents that portion of the total housing inventory within each municipality that is represented by deficient housing occupied by low and moderate income households.

### **Reallocated Present Need Eliminated**

The Second Round Rules prepared by COAH in 1994, defined “Present Need” as the sum of indigenous need and reallocated present need. The Third Round methodologies published by COAH in 2004, 2008 and 2014 eliminated the calculation of “reallocated present need” and adopted the estimates of the number of deficient units occupied by LMI households in each municipality as the measure of Present Need in each municipality. The elimination of reallocated present need was challenged but was upheld by Appellate Court decisions in 2007 and 2010, and in the 2013 decision of the Supreme Court affirming the Appellate Court Decisions:

“... the Appellate Division twice addressed the Third Round Rules’ elimination of excess present need and found it permissible under both the FHA and Mount Laurel II ... and this Court “substantially affirmed” that opinion. The Mount Laurel judges may proceed on this basis when reviewing plans of municipalities. [221 N.J. 1 (2015), pages 30-31].

### **Prior Round Deficiency Surrogates**

The prior rounds calculated Present Need as deficient housing units that were identified by surrogates unique to each community. Surrogates are characteristics that would indicate that the likelihood that housing units are deficient. Six housing quality characteristics were utilized, along with structure age, and represented the full range of characteristics that was available from Census data to estimate deficient housing. These characteristics included the year the structure was built, persons per room, inadequate plumbing, inadequate kitchen facilities, inadequate heating, inadequate sewer services and inadequate water supply. These inadequacies were calculated at the sub-regional level due to constraints on data availability for municipalities and allocated to individual municipalities. The Round 2 methodology utilized the seven proxies then available from Census data and classified units as deficient when two or more deficiencies were identified in these surrogate measures.

### **Revised Deficiency Measures**

Due to changes in data availability as well as improvements in municipal data, COAH's 2004 Round 3 methodology replaced the seven proxies from the prior round with three surrogates, two of which could be measured directly (inadequate plumbing facilities and inadequate kitchen facilities) as well as one for old and overcrowded units represented by housing units constructed before a given date with more than 1.01 persons per room. Under this updated approach, the identification of a unit with any one of the three proxies would be classified as deficient.

### **Appellate Division Ruling**

COAH's change in methodology for the calculation of Present Need was challenged and was specifically upheld by a 2007 Appellate Division decision:

Because the third round methodology captures a newer overcrowded unit in the rehabilitation share if it lacks plumbing or kitchen facilities, and other previously used data are unavailable in the current Census data, COAH's new approach to as to overcrowded units is neither arbitrary nor irrational.

[In re Adoption of N.J.A.C. 5:94 & 5:95, 390 N.J. Super 1]

The acceptance of COAH's revised methodology for calculating deficient housing units within Present Need is also found in the Supreme Court's March 2015 decision:

"...the Appellate Division has also approved a methodology for identifying substandard housing units that used "fewer surrogates [or indicators] to approximate the number of deficient or dilapidated housing units". Id at 38. In fact, COAH's Second Round Rules had approximated based on seven indicators, while the earlier-adopted Third Round Rules considered only three. Id at 38-39. The appellate court acknowledged a change in the available United States Census data that triggered the reduction in indicators and found that COAH did not abuse its discretion in reducing the number of factors from seven to three. Id at 40. That, like the previously mentioned areas left to COAH's discretion, and others not directly precluded by the Appellate Division's decisions or ours, remain legitimate considerations for Mount Laurel Judges when evaluating the constitutionality and reasonableness of the plans they are called upon to review."

[221 N.J. 1 (2015), pages 46-46]

**FSHC Present Need** - Consistent with the Third Round approach utilized by COAH, Present Need is estimated by FSHC at the start of the Prospective Need period for the forthcoming round, which for Third Round calculations, would be as of July 1, 2015. Present Need, as previously discussed, represents that portion of the total housing inventory within each municipality that is represented by deficient housing occupied by low and moderate income households at the beginning of the Prospective Need period. FSHC estimates the number of deficient housing units in a municipality using a process similar to that utilized by COAH to determine the Rehabilitation Share in the past. Although the number of surrogates, or proxies, used to identify deficient units has been reduced from seven to three, data is now available at the municipal level compared to the use of calculations in the prior round at the sub-regional level that were then allocated to municipalities.

The estimate by FSHC of the number of deficient units as of July 1, 2015 utilizes the three new surrogates for deficient units; a) lacking complete plumbing facilities; b) lacking complete kitchen facilities, and; c) overcrowding (more than 1.01 persons per room) in housing units at least 50 years old. As indicated by FSHC the, “ Use of the year 1965 as a cut-off assures that all housing is at least 50 years old as of 2015” (FSHC, May 17, 2016, page 16). Steps are then taken to identify “unique deficient” units to avoid double counting units with multiple deficiencies. The proportion of unique deficient units occupied by LMI household is then calculated using 2010-2014 ACS PUMS data applied, not to the proportion of households with incomes less than 80 percent of reported ACS incomes, but to COAH calculated income limits. The number of deficient housing units occupied by LMI households was estimated by FSHC to amount 82,655 units in 2000.

The regional LMI share as of 2012 (midpoint of the 2010-2014 ACS data) is then applied to each municipality’s share of the regional unique deficient housing units to yield each municipality’s 2012 Present Need. Since data is not yet available for 2015, FSHC then estimates the number of unique deficient units as of July 1, 2015 by projecting the 2000 to 2012 change to 2015. This projection results in the estimate of Present Need as the number of “deficient housing units occupied by LMI HH in 2015” being 60,015 LMI housing units, which is a decrease from the 82,655 unique deficient housing units estimated to be occupied by LMI households in 2000:

<b><u>FSHC - New Jersey Present Need (Pre-Secondary Sources)</u></b>			
	<u>2000</u>	<u>2015</u>	Change
Unique Deficient LMI Housing Units	82,655	60,015	-22,640

The process that is used to estimate Present Need in 2000, which establishes the 2000-2012 change that is used to project the 2012-2015 increment, does not estimate the “old and overcrowded” housing units using the 50 year threshold used in the 2015 estimates, but uses the 1965 cut-off, rather than 1950 threshold that would have been applied if this calculation had been prepared in 2000. By changing the definition of old and crowded, FSHC derives a higher Present Need estimate for 2000 than for 2015. The substantial decline in Present Need is impacted by the change to the 50 year definition used for “old and overcrowded” in the 2000 estimate, a category that accounts for two-thirds of all deficient units. The indicated decline in the number of old and overcrowded LMI units between 2000 and 2015 is impacted by the change in the definition of such housing units.

Additional steps are undertaken by FSHC to adjust the 2015 Present Need estimate to account for prospective need “secondary sources” in the 48 Qualified Urban Aid Municipalities which are not allocated any prospective needs. Another adjustment is also made for the non-Qualified Urban Aid Municipalities for the remaining surplus secondary sources for 2015 -2025. These secondary source adjustments from the 2015-2025 prospective need are then applied to the 2015 Present Need to yield a “post secondary sources” Present Need that increases the 2015 unique LMI deficient housing units from 60,015 units to 80,037 units, an increase of 20,022 housing units, or a 33.4 percent increase. The adjustments undertaken by FSHC in their May 17, 2016 methodology to adjust the estimated 2015 Present Need to account for future (2015-2025) changes in secondary sources (filtering, conversions and demolitions) were not undertaken in FSHC’s July 2015 methodology, but were implemented in FSHC’s March 24, 2016 methodology.

**Econsult Present Need** - In their May 16, 2016 report (New Jersey Affordable Housing Need and Obligations), Econsult provides a detailed discussion (pages 16-26) of the methodology employed in their estimation of Present Need. The information presented by Econsult indicates that it is their opinion that Present Need, also known as “indigenous need” or “rehabilitation share”, “represents an estimate of the current stock of deficient housing within each municipality occupied by low and moderate income households”. Econsult further contends that Present Need is an estimate of current conditions that should be estimated at the start of the prospective need period, which for the third round calculations would be as of July 1, 2015. Unlike other components of need, the base unit of measurement is not households, but housing units. The Econsult report



reviews the methodology employed in Rounds 1 and 2 for the calculation of Present Need as well as the elimination of re-allocated present need in COAH's Round 3 methodologies published in 2004, 2008 and 2014. The Round 3 change in the surrogates utilized and the elimination of the "re-allocated present need" (which were challenged but upheld by the Appellate Division), were acknowledged and adopted by Econsult in their use of the Round 3 approach for the calculation of Present Need.

Econsult employs a four step process to estimate Present Need at the start of the Prospective Need period in 2015. The specific procedures utilized by Econsult utilize the three new surrogates for deficient units; a) lacking complete plumbing facilities; b) lacking complete kitchen facilities, and; c) overcrowding (more than 1.01 persons per room) in housing units at least 50 years old (1960). The data utilized in the preparation of these Present Need estimates is derived from the 2000 Census and from PUMS data from the 2009-2013 ACS, which provides an estimate for the 2011 mid-point. The efforts undertaken to assure the mutual exclusivity of the deficient units are described and estimates of "unique deficient" units are derived from 2009-2013 ACS data yielding a 2011 "mid-point" estimate. A similar process was undertaken by Econsult using 2000 Census data to estimate the LMI Present Need as of 2000. The Present Need estimates prepared by Econsult utilized the "old and crowded" surrogate encompassing units that were at least 50 years old (constructed pre-1950 for the 2000 estimate and pre-1960 construction for the 2015 estimate).

The proportion of the unique deficient units occupied by LMI households was derived using the PUMS data from the 2009-13 ACS in comparison to the median household income information for the same time period from the 2009-2013 ACS data. This series of estimates and calculations yielded an estimate that, of the 90,690 unique deficient housing units identified in the 2011-2013 ACS data, approximately 67.8 percent, or 61,500 units, were unique deficient units occupied by LMI households as of 2011 (2009-2013).

In order to project the number of unique deficient housing units occupied by LMI households to 2015, a similar analysis was undertaken using PUMS data from the 2000 Census with LMI median income households derived directly from the 2000 Census. The proportion of the unique deficient units occupied by LMI households were estimated by Econsult using the household size and income levels used in the Prospective Need calculation and these county proportions were

applied to the estimate of unique deficient units for each municipality, resulting in estimates of unique deficient LMI units. These procedures resulted in a estimate of 52,386 unique deficient housing units occupied by LMI households in 2000. The increment in the number of unique deficient LMI housing units in 2000 (52,386) and 2011 (61,500) provided the basis for the projection of an increase to 65,034 LMI unique deficient units in 2015, representing the 2015 statewide Present Need.

The calculations of Present Need undertaken by Econsult at the beginning of the Prospective Need cycle (2015) indicates an increase in the proportion of unique deficient housing units occupied by LMI households, from 65.8 percent in 2000 to 67.8 percent in 2011, as well an increase in the total number of unique deficient housing units occupied by LMI households, from 52,386 in 2000 to 65,034 units in 2015:

**Econsult Present Need As of 2000 and 2015  
(Unique Deficient LMI Units)**

<u>Region</u>	<u>2000</u>	<u>2015</u>	<u>Change</u>
Region 1 - Northeast	21,079	25,808	4,729
Region 2 - Northwest	15,403	19,332	3,929
Region 3 - West Central	4,609	6,095	1,486
Region 4 - East Central	4,654	7,195	2,541
Region 5 - Southwest	4,213	3,284	-929
Region 6 - South-Southwest	<u>2,428</u>	<u>3,320</u>	<u>892</u>
State	52,386	65,034	12,648

Econsult's estimates of 2015 Present Need are also subject to subsequent adjustments for "secondary sources" that are discussed in a later section (Allocation of Secondary Sources, pages 82 through 86) of their May 16, 2016 report. The secondary source adjustments to Present Need undertaken by Econsult are based upon the Round 2 methodology where secondary source adjustments apply to both Present and Prospective Need, without regard to where the need was generated, and that the reductions or increases to housing need due to secondary supply and demand apply to all municipalities, including Urban Aid locations. The methodology employed by Econsult first applies the secondary source adjustment to Prospective Need and in situations where this adjustment brings the Prospective need to zero, or where the Prospective Need is already zero, such

as Urban Aid municipalities, the remaining adjustments are applied to Present Need.

When a municipality has a downward secondary source adjustment (reduction) that is larger than the sum of Present and Prospective Need, a negative need would be indicated. In Round 2, this negative need below the “zero bound” was eliminated and left unaccounted for. It is Econsult’s position that the deletion of secondary source adjustments in zero bound municipalities is problematic and does not recognize the supply, or need, represented by secondary sources within the region. To correct what Econsult believes is the “zero bound flaw”, it is suggested that the additional adjustments to downward need below the “zero bound” should be summed for each region and allocated to non “zero bound” municipalities in proportion to their share of the region’s total Present and Prospective Need. The indicated method for determining secondary source adjustments to Present Need cannot be estimated prior to the establishment of Prospective Need and the allocation of secondary source adjustments to Present Need. Setting aside this sequencing issue, the estimates provided by Econsult on page 84 of the May 16, 2016 report, indicate that the secondary sources (demolitions, conversions and filtering) estimated to occur between 2015 and 2025 would reduce the 2015 Present Need from 65,034 LMI housing units to 44,388 LMI housings units, or a reduction (supply) of 20,646 LMI housing units.

### **Present Need Comparisons**

A comparison of the 2015 Present Need estimates (pre-secondary sources) prepared by FSHC to those prepared by Econsult indicates that Econsult’s 2015 estimate of 65,034 units is 8.4 percent higher than FSHC’s 2015 (pre-secondary source) estimate of 60,015 LMI units. When secondary sources are applied, FSHC estimates an increase to 80,037 housing units while Econsult estimates a decrease to 44,388 housing units:

#### **Comparison of 2015 Present Need Estimates (Unique Deficient LMI Units)**

	Pre-Secondary <u>Sources</u>	Secondary <u>Sources</u>	Post-Secondary <u>Sources</u>
FSHC	60,015	+20,022	80,037
Econsult	65,034	-20,646	44,388

The minor deviations in the pre-secondary source 2015 Present Need estimates are significantly impacted by the adjustments for secondary sources. FSIHC estimates that the 2015 Present Need will be increased by 33.4 percent (20,022 units) while Econsult estimates that secondary sources will reduce the 2015 Present Need by 31.7 percent

The pre-secondary source estimate of Present Need includes three measure of deficiencies, of which old and crowded housing units account for two thirds of the total deficient housing units (Econsult, May 16, 2016, page 21). Econsult's Present Need estimates, which utilize decennial Census data for crowded units that are at least 50 years old in 2000 (pre-1950) and 2015 (pre-1960) provide estimates for 2000 and for 2015. The FSHC calculation for 2000 uses the same 1965 cut-off that was utilized for the 2015 estimates, and thus reduces the "old" definition to include units that are 35 years old or older, rather than the "at least 50 years old" criteria applied in the 2015 estimate. This change in the definition impacts the projection of Present Need from the 2012 ACS data base to 2015. The truncated cut-off for FSHC's Present Need calculations impacts the Present Need projections for 2015 and suggests that there has been a substantial decrease in the number of LMI households occupying deficient housing units between 2000 and 2015. These estimates are affected by the change in the definition of "old" and, therefore do not represent an accurate measure of Present Need.

A more significant differential in the estimation of the 2015 Present Need is attributable to adjustments for secondary sources utilized by FSHC and Econsult. Due to subsequent estimation of secondary sources of affordable housing, FSHC increases Present Need by 20,022 LMI housing units while Econsult reduces Present Need by 20,646 housing units. A determination of the reasonableness of these two alternative estimates of 2015 Present Need will be contingent upon the reliability of the calculation of secondary sources of affordable housing supply.

## **6.0 PROSPECTIVE NEED**

Prospective need is an estimate of the future anticipated need for affordable housing units which, by design, definition and prior practice is a future looking projection. The development of estimates of a future anticipated need for LMI housing is based upon reasonable expectations for population growth, the accompanying increases in households and determinations of the proportion of those households likely to be represented by LMI households. The incremental change in the

estimate of LMI households within each housing region at the beginning and end of this ten year period represents the regional prospective need that is then allocated to the municipalities within each region. Increases in population are a primary determinant in the estimation of affordable housing needs during the 2015-2025 Prospective Need period. Population changes during the 2015-2025 Prospective Need period, unlike the growth that can be documented from 2000 to 2015, are dependent upon projections, forecasts and other estimates.

### **Population Projections**

Estimates of future growth of population and housing were, according to section 307 (e) of the FHA, to be provided annually by the State Planning Commission:

To assist council, the State Planning Commission established under that act shall provide the council annually with economic growth and decline projections for each housing region for the next ten years. The council shall develop procedures for periodically adjusting regional need based upon low and moderate income housing that is provided in the region through any federal, State, municipal or private housing program.

[FHA 307(e)]

The use of ten year economic growth projections from the State Planning Commission are not referenced in the population projections utilized in the Prior Rounds.

### **Prior Round Population Growth**

The Round 1 methodology used population projections from the New Jersey Department of Labor, now New Jersey Department of Labor and Workforce Development (NJDLWD) as set forth in their “Historic Migration Model”. In Round 2, population estimates were derived by averaging the NJDLWD projections from the Historical Migration Model and the Economic-Demographic Model and then were further adjusted using a proprietary model from the Center for Urban Policy Research. The Round 2 methodology cannot be replicated exactly since the Historic Migration Model now only provides statewide projections of total population and the CUPR model is not available.

### **NJDLWD Population Projections**

The NJDLWD periodically prepares updated population projections for New Jersey and its counties using the “preferred” Economic-Demographic Model. The most recent NJDLWD projections, published in 2014, provide projections of the state’s total population by county and age group in five year intervals for the 20 year period from 2012 to 2032 using the Economic-Demographic Model. The most recent projections are as of July 1 and reflect only “total” population without allocations for group quarters or household population. The corresponding projections by NJDLWD using the Historic Migration Model is now provided only on a statewide basis.

**FSHC Population Projections** - The May 17, 2016 report by FSHC relies upon the population projections prepared by NJDLWD using the Economic-Demographic Model. FSHC’s use of the Economic-Demographic Model projections deviates from the Round 1 methodology (Historic Migration Model) and the Round 2 methodology (averaged Historic Migration and Economic-Demographic Model). As indicated on page 27 of FSHC’s May 17, 2016 report, whereas the 2015 population was based upon the July 1, 2015 population estimates published by the U.S. Census Bureau, the 2025 population is “projected”. The estimate of the state’s population growth from 2015 to 2025 utilizes the 2015 Census estimate of 8,958,013 persons and interpolates the NJDLWD 2022 and 2027 projections to derive an population estimate of 9,377,040 persons as of July 1, 2025. During this ten-year interval, FSHC estimates that the state’s total population will increase by 419,037 persons or approximately 41,904 persons annually ( $9,377,040 - 8,958,013 = 419,037 / 10 = 41,904$ ). The annual population growth indicated by Economic-Demographic Model between 2015 to 2025 (41,904 persons per year) is 1.35 times the annual population growth of 37,754 persons per year between the 2000 and 2010 Census and is 1.32 times the annual population growth of 31,642 persons per year between the 2010 Census to 2015 Census Estimate:

#### **New Jersey Population Trends**

	Census <u>2000</u>	Change <u>2000-10</u>	Census <u>2010</u>	Change <u>2010-15</u>	Census Est <u>2015</u>
New Jersey	8,414,350	377,544	8,791,894	166,119	8,958,013
Annual		37,754		31,642	
Percent		0.449		0.360	

**Econsult Population Projections** - The development of population projections for the 2015-2015 Prospective Need period are set forth on pages 29 through 33 of Econsult’s May 16, 2016 “New Jersey Affordable Housing Need and Obligations” report. For the Third Round (2015-2025) projections, Econsult utilizes the Round 2 methodology where the Historic Migration and Economic Demographic Models are combined and averaged, notwithstanding the inavailability of detailed county and age group projections for the Historic Migration Model. As discussed by Econsult on page 30, the primary distinction between these two projection models is in the migration assumptions, and notes that NJDLWD states that “(T)he projected population from these two models may be used as a range for possible populations change in the future”. Econsult further notes that NJDLWD’s publication entitled “Methodology-The Projections Models”, indicates that the assumptions regarding population base, fertility, mobility, cohort aging, and the migration of persons 65 years and older are identical in the Economic-Demographic and Historic Migration Models. Despite these similarities, however, the two population projection models yield different projections.

Interpolating the 2012 and 2017 data and the 2022 and 2027 data, Econsult derives population estimates for New Jersey for 2015 and 2025, respectively. A comparison of the 2015 estimates and the 2025 projections from NJDLWD’s Historic Migration and Economic-Demographic Models are summarized in the following tabulation:

<b><u>NJDLWD Statewide Population Projections</u></b>			
<u>Model</u>	<u>2015</u>	<u>2025</u>	<u>2015-2025 Growth</u>
Historic Migration	8,963,960	9,170,000	206,040
Economic Demographic	8,974,040	9,377,040	403,000
Averaged	8,969,000	9,273,520	304,520

Econsult’s “averaged” 2015 statewide population estimate of 8,969,000 persons is 10,987 persons higher than the Census Bureau’s 2015 estimate of 8,958,013 persons, while the 2015 estimate (interpolation) from the Economic- Demographic Model of 8,974,040 persons is 16,027 persons higher than the 2015 Census estimate.

In addition to the deviations between the interpolated 2015 populations, there is also a difference in the amount of population growth projected between 2010 and 2015 by the Historic

Migration and Economic Demographic Models. During the period from the 2010 Census (April 1, 2010) and the Census Bureau's 2015 (July 1, 2015) Population Estimate for New Jersey, the State's population increased from 8,791,894 persons to 8,958,013 persons, indicating a gain of 166,119 persons during this 5.25 year period, or approximately 31,642 persons annually. The Census Bureau's July 1, 2015 population estimate for New Jersey (8,958,013) is closer to the population projected with the Historic Migration Model (8,963,960) than the Economic-Demographic projection (8,974,040), while the annual population growth between the 2010 Census and the July 1, 2015 Census population estimate, which amounts to 31,642 persons is most similar to the "averaged" population growth of 30,452 persons annually. Nevertheless, both models yield 2015 population estimates (8,963,960 to 8,974,040) that are above the 2015 Census estimate of 8,958,013 persons.

#### **2015 Population Comparisons**

	Census <u>2010</u>	Census <u>Est 2015</u>	NJDLWD <u>2015</u>	2015 <u>Deviation</u>
Historic Migration	8,791,894	8,958,013	8,963,960	+ 5,947
Economic Demographic	8,791,894	8,958,013	8,974,040	+16,027
Averaged	8,791,894	8,958,013	8,969,000	+10,987

Econsult's choice of the Round 2 methodology, with the use of an "average" of the Historic Migration and Economic Demographic projections, is reported to be based on the reliability of the "averaged" projections rather than either model individually. Using the NJDLWD biannual projections that have been published from 2000 through 2012 with comparisons to Census populations and Census estimates, Econsult reports that the twelve time periods analyzed indicate an average annual Census population increase of 0.39 percent compared the average annual increments of 0.58 percent with the Economic Demographic Model and 0.62 percent with the Historic Migration Model and 0.60 percent annually for the "averaged" projections. During the 2000-2012 NJDLWD projections (base year), both models have generally exceeded the Census population estimates.

The long term reliability of the NJDLWD projections appears to vary by time period and geographic area. A review of the 20 year projections produced by NJDL in 1985 in comparison to



the actual 1990, 2000 and 2010 Census populations in New Jersey and the Region 4 counties reveals varying degrees of reliability in projecting long term population growth, with significant deviations by County and projection model. These comparisons are summarized below:

**New Jersey Department of Labor Population Projections  
New Jersey and Region 4 Counties: 1990 to 2020**

	<u>Economic- Demographic Model</u>	<u>Historic Migration Model</u>	<u>Averaged Projection</u>	<u>Actual Census Population</u>
<b><u>1990 Projection</u></b>				
New Jersey	7,842,300	7,719,900	7,781,100	7,730,188
Mercer County	338,600	317,500	328,050	325,824
Monmouth County	547,200	555,100	551,150	553,124
Ocean County	<u>413,300</u>	<u>442,100</u>	<u>427,700</u>	<u>433,203</u>
Region 4	1,299,100	1,314,700	1,306,900	1,312,151
<b><u>2000 Projection</u></b>				
New Jersey	8,450,300	8,051,100	8,250,700	8,414,350
Mercer County	387,000	320,300	353,650	350,761
Monmouth County	591,600	591,600	591,600	615,301
Ocean County	<u>484,400</u>	<u>561,200</u>	<u>522,800</u>	<u>510,916</u>
Region 4	1,463,000	1,473,100	1,468,050	1,476,978
<b><u>2010 Projection</u></b>				
New Jersey	8,895,700	8,124,000	8,509,850	8,791,894
Mercer County	429,600	315,200	372,400	366,513
Monmouth County	630,600	596,300	613,450	630,580
Ocean County	<u>545,900</u>	<u>665,400</u>	<u>605,650</u>	<u>576,567</u>
Region 4	1,606,100	1,576,900	1,591,500	1,573,660

Source: NJDLI, Office of Demographic and Economic Analysis, Division of Planning and Research, November 1985.

The comparisons of the population projections prepared in 1985 to the actual 1990, 2000 and 2010 Census populations indicate that, on a statewide basis, the Historic Migration was more accurate in the 5-year projection (1990) while the Economic Demographic Model was more accurate in the 10 and 15 year projections (1995 and 2010). The averaged projections, on the other hand were more accurate in Region 4 and tended to diminish the deviations found in individual counties relative to the individual model projections.

## **Population Projection Comparisons**

The projection of population is a critical component in the estimation of future levels of household population, the number and increase of occupied households and ultimately the increase in LMI households. Obviously, the projection model will influence the estimation of the number and growth of LMI households. FSHC has selected a projection based upon the only (Economic Demographic) model that provides detailed information by county and age groups. Econsult, on the other hand, uses the Round 2 methodology that averages the Historic Migration and the Economic-Demographic Models with the objective of diminishing the projection variations ascribed to a single data source. Econsult's use of two measures of population growth is, nevertheless consistent with the Round 2 as well as the principles set forth in AMG Realty that were cited by Judge Serpentelli:

With regard to internal checks and balances, two examples will suffice. The projection of population to determine prospective need averages two population models, one of which is considered conservative and one liberal. The allocation factors contain numerous checks and balances... The two employment factors in the prospective need formula tend to check each other because one reflects past trend and the other, future projections.

[AMG Realty Co v Warren Tp, 207 N.J. Super. 388, p453-454]

The population projections for the Prospective Need period used by FSHC and Econsult are the same at the time of the 2010 Census, slightly different for 2015 estimates with a much larger deviation for the 2025 projections:

### **New Jersey Total Population**

	Census <u>2010</u>	Estimate <u>2015</u>	Projection <u>2025</u>	Change <u>2015-25</u>
FSHC	8,791,894	8,958,013	9,377,040	419,027
Econsult	8,791,894	8,969,000	9,273,520	304,520

## **Household Population**

The projection of total population is the initial step in the process leading to the estimation of the increase in LMI households. The preparation of the estimated household population is derived by deducting the number of persons residing in group quarters, which includes persons in

correctional facilities, college dormitories, military installations, nursing homes, mental institutions and other “group” facilities. New Jersey’s entire population is classified as either living in households or group quarters and the reduction of total population by the number, or proportion, of group quarters population will yield household population.

**FSHC Household Population Estimates** - The methodology employed by FSHC adjusts the total population through the deduction of Group Quarters population to yield an estimate of household population. In FSHC’s population estimates, a group quarters population of 186,167 persons was estimated for 2015 and represented 2.08 percent of the total population. For 2025, FSHC estimates a group quarters population of 201,122 persons, or approximately 2.14 percent of the total estimated population. By deducting the group quarters population from the total population, household populations of 8,771,846 persons and 9,175,818 persons were derived for 2015 and 2025, respectively, and indicate a 2015-2025 household population increment of 404,072 persons:

**FSHC Total and Household Population 2015 and 2025**

<b><u>FSHC</u></b>	<b><u>2015</u></b>	<b><u>2025</u></b>	<b><u>Change</u></b>
Total Population	8,958,013	9,377,040	419,027
In Group Quarters	<u>186,167</u>	<u>201,122</u>	<u>14,955</u>
In Households	8,771,846	9,175,918	404,072

**Econsult Household Population Estimates** - The methodology employed by Econsult also adjusts the total population through the deduction of Group Quarters population to yield an estimate of household population. Econsult calculates the proportion of persons in group quarters using the 2010 Census and 2014 ACS data by county and age group, and projects these proportions to 2015 and 2025. For 2015, Econsult estimates 2.09 percent of the total population (187,770 persons) were in group quarters and that this group quarters population would be estimated to account for 2.14 percent (197,750 persons) of the total population in 2025. Deducting the group quarters population, household populations of 8,781,230 persons and 9,075,770 persons were derived for 2015 and 2025, respectively, and indicate a 2015-2025 household population increment of 294,540 persons:

### **Econsult Total and Household Population 2015 and 2025**

<b>Econsult</b>	<u>2015</u>	<u>2025</u>	<u>Change</u>
Total Population	8,969,000	9,273,520	304,520
In Group Quarters	<u>187,770</u>	<u>197,750</u>	<u>9,980</u>
In Households	8,781,230	9,075,770	294,540

As indicated in the preceding tabulations, FSHC projects a greater increase in total population based upon the single NJDLWD Economic Demographic model as well as a greater increase in household population. The total population and the increase between 2015-2025 projected by Econsult is lower due to the averaged (Historic Migration and Economic Demographic Models). During the ten year projection period, the average annual increase in household population amounts to 40,407 persons in the FSHC projection and 29,454 persons in the Econsult projection. These determinations of the household population at the beginning(2015) and end (2025) of the Prospective Need period provide the foundation for the preparation of estimates of the number of households and the growth thereof.

### **Headship Rates and Households**

The estimation of the increases in households is derived by FSHC and Econsult using projections of total population growth, adjusted for non-household (group quarters) population, and converted to households (occupied housing units) through the use of “headship rates”. The headship rate represents the probability that a person is a head of a household, and is the fractional representation of the commonly used “persons per household” measure utilized by the Bureau of the Census. For example, a group of 100 persons residing in 40 households would yield an average of 2.50 persons per household ( $100 / 40 = 2.50$ ) and reflect a headship rate (probability) of 0.40 ( $40 / 100 = 0.40$ ). To the extent that the projection of future headship rates will significantly influence estimates of the number of households corresponding to such population projections, projecting future headship rates is another critical assumption in preparing estimates of the number of households at the beginning and the end of the prospective need period, and the increment thereof.

### **Prior Headship Methodology**

In COAH's 1994, Round 2 methodology, the change in actual headship rates between the 1980 Census and 1990 Census was calculated and future headship rates were projected to change at one-half the rate observed between 1980 and 1990. The most recent Census data contained in the 2000 and 2010 Census reveals a virtually unchanged headship rate during the most recent decennial census interval. In this regard, the headship rate was 0.3728 in 2000 and 0.3735 in 2010, indicating a 10 year increment of 0.0007. Using the Round 2 methodology, one-half of this 10-year increment would be 0.00035 and result in a 5-year projection (2015) of 0.373635 and a 10-year (2020) projection of 0.37385. Extended to 2025, a headship rate of 0.374025 would be indicated:

#### **Projected Headship Rates - Round 2 Methodology**

	Census <u>2000</u>	Census <u>2010</u>	Projected <u>2015</u>	Projected <u>2020</u>	Projected <u>2025</u>
Headship Rate	0.3728	0.3735	0.373675	0.373850	0.374025
Persons/Household	2.6820	2.6771	2.6761	2.6749	2.6736

The changes in overall headship rates and average household size that would be derived using the Round 2 methodology applied to the two most recent decennial Census, would indicate a nominal increase in the average household size in New Jersey from 2.6771 persons per household at the time of the 2010 Census to a projection of 2.6736 persons per household in 2025. The corresponding headship rates would amount to 0.3735 in 2010 and 0.3740 in 2025.

**FSHC Headship Rates** - FSHC has prepared estimates and projections of headship rates that are used to derive estimates of the number of current (2015) and future (2025) households using the data from the 2010 Census and the most recent (2014 ACS One Year) survey data. The prior projections prepared by FSHC in July 2015 used the 2013 ACS (One-Year) survey data and updated this source to the 2014 ACS (One-Year) survey data in the more recent March 24, 2016 and May 17, 2016 reports. The use of the 2010 Census and ACS survey data has disclosed certain inconsistencies that have been acknowledged by FSHC. In this regard, the ACS data for both 2013 and 2014 report fewer occupied households in New Jersey than the number reported by the 2010 Census. According

to the ACS surveys, there were 38,221 fewer households in 2013 than at the 2010 Census and 18,705 fewer households in 2014 than at the 2010 Census. The use of the ACS data for the purpose of projecting household size would suggest significant increases in the average household size between 2000 and 2013 or 2014 due to the fewer number of occupied households reflected in the ACS data:

#### **New Jersey Population, Households and Headship Trends**

	Census <u>2000</u>	Census <u>2010</u>	ACS <u>2013</u>	ACS <u>2014</u>
Total Population	8,414,350	8,791,894	8,899,339	8,938,175
In Group Quarters	194,821	186,876	186,622	185,527
In Households	8,219,519	8,605,018	8,712,717	8,752,648
Occupied Housing Units	3,064,645	<b>3,214,360</b>	<b>3,176,139</b>	<b>3,194,844</b>
Persons Per Household	2.6820	2.6771	2.7432	2.7396
Headship Rate	0.3728	0.3735	0.3645	0.3650
Change		<u>2000-10</u>	<u>2010-13</u>	<u>2010-14</u>
Household Population	-----	385,499	107,699	147,630
Households	-----	149,715	-38,221	- 19,516

Recognizing these disparities, FSHC engaged Daniel T. McCue, a mathematician, to examine the differences in the Census and ACS data. Mr. McCue prepared and submitted reports dated January 29, 2016, March 24, 2016, April 8, 2016 and May 17, 2016. The January and April reports specifically addressed the differences in the Census and ACS data:

“Although both the Decennial Census and American Community Surveys cover the same subjects - including estimates of people, housing units, and occupied housing units -they are entirely different surveys that produce different results. They are conducted in different manners, with different methodologies, sampling frames, time periods, and even definitions of what constitutes an occupied household. Most importantly, the Decennial Census is a mandatory full count of the population taken every ten years that aim to sample everyone in the country, while the American Community Surveys are much smaller, voluntary, annual surveys which in 2014 were based on interviews (of) approximately 2.3 million households nationwide and 57,000 in New Jersey. Given the size and resources dedicated to the Decennial Censuses, they are the most trusted source of estimates of the number of people and households in the U.S.” (McCue, January 29, 2016, Page 3)

The lower number of households reported in the ACS data is not a problem that is limited to New Jersey, but occurs throughout the ACS data nationwide. Mr. McCue reports that the Census Bureau has not fully resolved why there are differences in the household counts and that a comparison of 2010 ACS (One-Year) data to the 2010 Census, discloses a difference of 2.1 million households nationwide. To the extent that the population reported in the ACS surveys are virtually equivalent to the Census population, the lower household counts will necessarily yield lower headship rates. After reviewing and comparing the Census and ACS data, and in view of the small base and high margins of error in the ACS data, Mr. McCue questions “using two incomparable data sets” (McCue January 29, 2016, Page 9) and further questions

“...whether it is appropriate to trend headship rates at all, given the inability to separate short term events related to economic cycle that may be reversed in future years”.  
(McCue, January 29, 2016, page 13).

In the subsequent, April 8, 2016 report, Mr. McCue opines that the benefit of adding four more years to the 2010 Census data by attempting to use the 2014 ACS data “is far outweighed by the errors introduced by incorporating the ACS: (April 8, 2016, page 3).

Despite these shortcomings, the methodology utilized by FSHC to estimate and project headship rates for the projection of occupied households, does not abandon the use of ACS data, but creates a procedure to “calibrate” the 2014 ACS (One Year) survey data by comparing the 2010 Census and 2010 ACS data in order to create a ratio that is then used to adjust (increase) the 2014 ACS households to yield an estimate that would represent 2014 Census households. The adjusted number of 2014 households is then projected to yield an estimated number of 2015 households. The final step is the projection of the 2014 headship rates by county and age group to 2015 and then using a headship rate “held constant when projected to 2025”. Although FSHC indicates that headship rates are held constant by county and age group, variations in the growth rates by county and age group result in an overall increase in headship rates and a decline in average household size between 2015 and 2025:

### **FSHC Population, Headship Rate and Household Projections**

	<u>2000</u>	<u>2015</u>	<u>2025</u>
<u>Total Population</u>	8,414,350	8,958,013	9,377,040
Group Quarters	194,821	186,167	201,122
In Households	8,219,519	8,771,846	9,175,918
<u>Occupied Households</u>	3,064,645	3,255,437	3,460,112
Headship Rate	0.3728	0.3711	0.3771
Persons Per Household	2.6820	2.6945	2.6519
<u>Increase</u>			
Household Population	-----	543,663	404,072
Occupied Households	-----	190,792	204,675
Headship Rate	-----	<b>0.3509</b>	<b>0.5065</b>
Persons Per Household	-----	<b>2.8495</b>	<b>1.9742</b>

As indicated in the preceding tabulation, FSHC's methodology estimates an increase of 190,792 households between 2000 and 2015 (12,510 households/year) and projects an increase of 204,675 households between 2015 and 2025 (20,468 households/year). The average household size is projected to decrease from 2.6945 persons in 2015 to 2.6519 persons in 2025. The incremental increase between 2015 and 2025 amounts to 404,072 household residents and 204,675 households, indicating a 10 year increment of 1.9742 persons per household and a headship increment of 0.5065.

The population and housing changes between 2000-2015 and the 2015-2025 Prospective Need period are significantly different in terms of the demographics of the incremental populations. Between 2000 and 2015, the added population was represented by households that were substantially larger than the 2000 base population (2.8495 persons vs. 2.68320 persons), but are much smaller in the 2015-2025 projection, with an incremental (2015-2025) household size approximately two-thirds (1.9742 persons vs. 2.8621 persons) of that observed during the prior 15 years. The annual household growth over the past 15 years (2000-2015) amounted to 12,501 households per year compared to the 2015-2025 projection of 204,675 households, or 20,468 households annually.



**Econsult Headship Rates** - The headship rates used by Econsult in their May 16, 2016 “Need and Obligations” report follow the Round 2 methodology where one-half of the change measured in the prior period is used to project the future. This projection is not a single statewide rate, but is applied across 8 age-groups in 21 counties for a total of 168 individualized rates. The specific methodology employed by Econsult recognizes the differences in the household counts of the Census and ACS survey data and adopts the approach used by FSHC in re-basing the ACS estimates to the Census base, adjusting 2010 ACS data to housing data from the 2010 Census. The projection of headship rate trends also utilizes the actual headship rates from the 2000 Census (0.3728) and 2010 Census (0.3735). The increase in headship rates (decline in household size) between 2000 and 2010 is then applied to the re-based ACS data to yield an estimated headship rate of 0.3699 for 2014. The re-based data and re-calibrated headship rate is then projected to increase to 37.04 percent in 2015 and to 37.45 percent in 2025. These adjusted headship rates yield an estimate of 3,252,210 households in 2015 and a projection of 3,398,450 households in 2025:

**Econsult Population, Headship Rate and Household Projections**

	<u>2000</u>	<u>2015</u>	<u>2025</u>
<u>Total Population</u>	8,414,350	8,969,000	9,273,520
Group Quarters	194,821	187,770	197,750
In Households	8,219,519	8,781,230	9,075,770
<u>Occupied Households</u>	3,064,645	3,252,210	3,398,450
Headship Rate	0.3728	0.3704	0.3745
Persons Per Household	2.6820	2.7001	2.6706
<u>Increase</u>			
Household Population	-----	561,711	294,540
Occupied Households	-----	187,565	146,240
Headship Rate	-----	0.3339	0.4965
Persons Per Household	-----	2.9948	2.0141

The methodology employed by Econsult estimates an increase of 187,565 households between 2000 and 2015 (12,299 households/year) and projects an increase of 146,240 households between 2015 and 2025 (14,640 households/year). The average household size is projected to decrease from 2.7001 persons in 2015 to 2.6706 in 2025. The incremental increase between 2015

and 2025 amounts to 294,540 household residents and 146,240 households, indicating a 10 year (2015-2025) increment of 2.0141 persons per household and a headship increment of 0.4965.

The population and housing changes estimated between the 2000 and 2015 and the 2015-2025 projection for the Prospective Need period are different in terms of the demographics of the incremental populations. Between 2000 and 2015, the added population was represented by household populations significantly larger (2.9948 persons) than the 2000 base population (2.6820 persons) but are substantially smaller in the 2015-2025 projection, with an incremental household size (2015-2025) approximately two-thirds (2.0141 persons vs 2.9948 persons) of that observed during the prior 15 years.

Differences exist between the 2025 population projections of FSHC and Econsult as well as the headship rates used to estimate the number of occupied households. FSHC projects an annual household growth between 2015 and 2025 (20,468 households/year) that is 1.64 times the annual household growth during the past 15 years (2000-2015 period) of 12,501 households/year. The annual increase in households projected by Econsult between 2015 and 2025 amounts to 14,624 households per year and is 1.17 times the estimated household growth between 2000 and 2015 (12,501 households/year).

### **Household Growth Comparisons**

The methodologies utilized by FSHC and Econsult rely upon the population projections published by NJDLWD and do not advance independent population projections. A comparison of the population and household growth observed between the past decennial Censuses (2000 and 2010) and in the most recent (2015) Census population estimate, provide a framework for the comparison of the growth that occurred since 2000 and the projections for the next 10 years (2015 to 2025). Between the 2000 and 2010 Census, New Jersey's total population increased by 377,544 persons and 149,715 households, indicating annual increments of 37,754 persons and 14,972 households. During the period between the 2010 Census (April 1, 2010) and the most recent Census population estimate for mid-year 2015 (July 1, 2015), New Jersey's population increased by 166,119 persons and 41,077 households during this 5.25 year period, indicating annual increments of 31,641 persons and 7,824 households per year. For the entire period from the 2000 Census (April 1, 2000) and the mid-year

2015 Census population estimate, New Jersey's population increased by 543,663 persons and 190,792 households during this 15.25 year period, indicating annual increments of 35,650 persons and 12,511 households:

**Population and Household Growth Estimates and Projections**

	Census <u>2000</u>	Census <u>2010</u>	Census Est <u>2015</u>	Econsult <u>2025</u>	FSHC <u>2025</u>
Total Pop.	8,414,350	8,791,894	8,958,013	9,273,520	9,377,040
Increase	-----	377,544	166,119	315,507	419,027
Annual	-----	37,754	31,641	31,551	41,903
Households	3,064,645	3,214,360	3,255,437	3,398,450	3,460,112
Increase	-----	149,715	41,077	143,013	204,675
Annual	-----	14,972	7,824	14,301	20,468

A review of New Jersey's population and household growth over the past 25 years (1990 to 2015) reveals a declining trend with the lowest annual increases occurring in the most recent period.

**Census Population and Housing Trends**

	Census <u>1990</u>	Census <u>2000</u>	Census <u>2010</u>	Census Estimate <u>2015</u>
Population	7,740,820	8,414,350	8,791,994	8,958,013
Households	2,794,711	3,064,645	3,214,360	3,255,437
Population - Increase	----	673,530	377,644	176,019
Population - Annual	----	67,353	37,764	33,527
Household - Increase	----	269,934	149,715	41,077
- Annual	----	26,993	14,972	7,824

Whereas the NJDLWD population estimates for 2015 are (all models) somewhat higher than the official 2015 Census population estimates, the projections for the next 10 years (2015-2025 Prospective Need period) are above the growth observed during the past 15 years with the Economic-Demographic model but below the observed rate with the averaged model:

### **Recent and Projected Population Growth**

<u>Annual Increment Comparisons</u>	<b>Census (15.25yr)</b>	<b>Projection 2015-2025 (10 yr)</b>	
	<b><u>2000-2015</u></b>	<b><u>Econsult</u></b>	<b><u>FSHC</u></b>
Total Population - Increase	543,663	304,520	419,027
Annual	35,650	30,452	41,903

Increases in population are the foundation for the calculation of affordable housing needs in the future projections for the 2015-2025 Prospective Need period. The projections of future (Prospective Need) population growth prepared by FSHC and Econsult are dependent upon the published population projections of the NJDLWD without comparison to other independent sources.

The total population growth between the 2000 and 2010 Census amounted to an average annual increment of 37,764 persons while the population increment between the 2010 Census and the Census's mid-year 2015 estimate amounts to 33,527 persons annually. The annual growth recorded between 2000 and 2010 (37,764 persons / year) is more closely aligned with the FSHC estimate (41,903 persons / year) while the post 2010 growth (33,527 persons/year) is closer to, but still above, the Econsult estimate (30,452 persons /year). The population projections prepared by Econsult reflect a diminishment of the population growth trends observed since 2000 while the FSHC projections anticipate an increased rate of population growth compared to the post 2000 period. These differentials can be traced to the use of different NJDLWD projection models, where the Economic-Demographic Model anticipates more robust growth expectations than are anticipated by the "averaging" of the Economic-Demographic and Historic Migration Models.

The differences between the projections of FSHC and Econsult, as well as their deviations from recent population and housing trends, are reflections of the inherent uncertainties in forecasting. As noted by Robert S. Powell, PhD in his March 24, 2016 report, "One must be mindful that the prediction of economic and demographic trends into the future is risky business, and is not an exact science. The many factors and variables that combine to produce such results may change unexpectedly over a ten year period" (Nassau Capital Advisers, March 24, 2016, page 25).

### **Low and Moderate Income Households**

The preparation of estimates of the proportion of the total number of occupied households that are represented by low and moderate income households is another important factor in the determination of affordable housing needs and is the successive step after the estimation of the current, and the projection of the future, number of occupied households.

### **Definition**

The FHA furnishes definitions for low and moderate income housing that provide the basis for defining lower income households. According to the FHA, low income households are “households with a gross household income equal to 50% or less of the median gross household income for households of the same size within the housing region in which the housing is located” [N.J.S.A. 52:27D-304 ( c )], while moderate income households are “households with a gross household income equal to or more than 50% but less than 80% of the median gross household income for households of the same size within the housing region in which the housing is located” [ N.J.S.A. 52-27D-304 (d)] . Combined, these definitions would encompass all households with incomes less than 80% of the median gross household income for households of the same size within the housing region in which the housing is located.

### **Determining the Proportion of LMI Households**

The measurement and determination of the proportion of the total households with incomes below 80 percent of median gross household income may be derived from Census and ACS data and are established at the beginning of the Prospective Need period. The quantification of the number of households with incomes below 80 percent of the regional median income in the Prior Round was calculated using proportions for eight age groups in each of the State’s 21 counties.

**FSHC LMI Households** - The process undertaken by FSHC to estimate the proportion of total 2015 households that are LMI households utilizes 2014 ACS income data by age group and county that are updated to 2015 using a Consumer Price Index adjustment. The specific CPI index (US, Region, Urban Consumers, Wage Earners, All Items, Housing, etc) used for this adjustment

is not identified. The projection of total households by county and age group are then sorted by regional income limits using HUD 2015 income limits by “family size”. The proportion of total households that are LMI households, are not determined using the proportion of households reflected in the ACS data with household incomes below 80 percent of the median by household size, but in comparison to HUD “county income limits by family size”. Using this procedure, FSHC estimated that 1,348,144 of the 3,255,437 total households in 2015, or 41.41 percent, were LMI households.

The process for estimating the proportion of total households estimated to be LMI households in 2025 utilizes the 2014 ACS income data by county and age group updated to 2015 and then projected by the following method, “(T)his analysis projects that on a statewide basis 43.0 percent of New Jersey HH will qualify as LMI, under prior round methodology, in 2025”. The results of FSHC’s income analysis yields the following estimates of the proportion, and concomitantly, the number of LMI households as of 2015 and 2025.

**FSHC Low and Moderate Income Household Projections**

	<u>2015</u>	<u>2025</u>
<u>Total Population</u>	8,958,013	9,377,040
Group Quarters	186,167	201,122
In Households	8,771,846	9,175,918
<u>Occupied Households</u>	3,255,437	3,460,112
Percent LMI	41.41	42.96
LMI Households	1,348,144	1,486.615
<u>Increase</u>		
Occupied Households	-----	204.675
LMI Households	-----	138.471
Percent LMI/Total	-----	67.65

The increasing proportions of LMI households estimated by FSHC for 1999 (41.16 percent) and for 2015 (41.41 percent) indicate a 16 year increment of 0.25 percent, or 0.0156 percent annually compared to an increase of 1.55 percent between 2015 and 2025, or 0.155 annually, which is 10 times the annual increment observed between 1999 and 2015. This significant increase in the LMI proportion between 2015 and 2025 results in LMI households accounting for over two-thirds (67.65

percent) of the total household growth between 2015 and 2015. The data used by FSHC to estimate the proportions of LMI households combines data derived from different sources (ACS for household income and COAH/HUD for income thresholds) that are compiled by different entities for different purposes. This intermixing of data was a concern that was noted in the review of FSHC’s prior (July 2015) methodology and was acknowledged by FSHC in their October 28, 2015 response, which stated that:

“Because income qualification of LMI HH’s under the Prior Round methodology is not based on actual median income of New Jersey households (3.2 million), but rather is based on HUD’s estimate of the median income of New Jersey families (2.2 million), with adjustments by family size, it is not necessarily the case that exactly 40% of households will be at less than 80 % of median family income” (Page10, emphasis added).

There are significant differences between median household income and median family incomes and, as indicated by the most recent ACS data (2014 One-Year), median family incomes in New Jersey are 1.23 times median household income:

**Comparison of New Jersey Median Household and Median Family Incomes  
2014 ACS One-Year Estimate**

	<u>New Jersey</u>
2014 Median Household Income	\$71,919
2014 Median Family Income	\$88,419

Contributing to differences in these median income differences, is the fact that there are no one-person families and, accordingly, the “family” incomes exclude all one-person households which alone, accounted for 25.9 percent of all New Jersey households according the most recent ACS (2014 One-Year) data:

**New Jersey Households By Household Size  
2014 ACS (One-Year)**

	<u>Percent of Households</u>
1-Person Household	25.9
2-Person Household	30.5
3-Person Household	17.6
4-Person Household	26.0

The continued intermixing of non-comparable data can have a significant impact on the determination of the proportion and number of low and moderate income households. Whereas FSHC's increase in the proportion of LMI households from 41 to 43 percent may appear to represent a minimal change, in the context of the State's 3.3 million households, a 2 percent increase in the LMI proportion represents an increase of 66,000 LMI households. The choice of the data used by FSHC in their determination of the proportion and number of LMI households contributes to their forecasted inclusion of more than two-thirds of the 2015-2025 increase in total households as being represented by LMI households. COAH had noted in the last iteration of the unadopted Third Round rules that the proportion of total household growth represented by LMI households will be approximately 40 percent of the total household growth:

“Thus to the degree that age cohorts are differently composed and growing differently, the low- and moderate-income component of the population will also change as it ages into the future. Nonetheless, almost by definition about 40 percent (40.622%) of household growth will be comprised of low- and moderate-income household growth”. (46 N.J.R 953) Appendix A

COAH's expectation is significantly different than the 67.65 percent LMI share projected by FSHC between 2015 and 2025. If, for example, FSHC had utilized the same LMI ratio that it had determined for 2015 (41.41 percent) the increase in LMI households from 2015 to 2015 would have amounted 84,688 LMI households, as opposed to 138,471 LMI households, and the LMI proportion of the total household increase would be 41.41 percent, rather than 67.65 percent.